REMARKS

Reconsideration of the present application, continued under 37 C.F.R. § 1.114, is requested herein.

In the Office Action, the Examiner rejected Claims 1 and 3-14 under 35 U.S.C. § 103(a) as being unpatentable over Noel (U.S. Patent No. 6,383,540) in view of Saska et al. (U.S. Patent No. 5,443,650). The Examiner also rejected Claims 1 and 3-14 over Jönsson (U.S. Patent No. 4,159,350) in view of Saska et al. (U.S. Patent No. 5,443,650).

In response to the rejections, applicant has amended Claim 1 to more particularly define the invention as conducting the step of replacement of at least a part of the multivalent cations of the solution by monovalent metal cations after replacement of at least a part of the anions able to form complexes of the solution by monovalent anions. Claim 1 was further amended to more particularly define the anionic resin as a "strong" anionic resin and the cationic resin as a "strong" cationic resin. Support for the amendments appear in the original specification, *inter alia*, at page 3, lines 17-30 and at page 4, lines 21-27, respectively.

With respect to the rejection over Noel in view of Saska et al., the Examiner identified process steps of the references that were considered to be relevant to the claims, recognizing that Noel requires the cation exchange step to be carried out before the anion exchange. Notwithstanding, the Examiner found that any order of performing process steps is *prima facie* obvious in the absence of new or unexpected results. Additionally, the Examiner maintained that the Noel and Saska et al. references

were properly combined, despite technological differences, since both dealt with aqueous solutions of food products.

As for the rejection over Jönsson in view of Saska et al., the Examiner stated that Jönsson teaches ion exchange for desalination of whey by conducting it through an ion exchange resin and a cation exchange resin. Noting that the regeneration of the resins in Jönsson does not use an aqueous NaCl solution, the Examiner relied on Saska et al. for such teaching. Despite differences between the technological areas of Jönsson and Saska et al., the Examiner again noted that both dealt with aqueous solutions of food products such that combination was proper.

Applicant respectfully traverses the findings of the Examiner with respect to the rejections, as more fully set forth in applicant's previous amendment. In further support, applicant submits herewith the Declaration of Stanislas Baudouin. Mr. Baudouin has signed a version of this Declaration. However, the undersigned attorney noted a few typographical mistakes on the first and last pages of the Declaration. The Declaration has been corrected, but Mr. Baudouin currently is on vacation. A corrected unsigned Declaration is attached along with pages 2-5 of the signed Declaration. A correct signed version will be filed when the declarant returns from vacation. This Declaration describes improved and unexpected results of the methods known in the art for the decalcification of an aqueous solution of whey or whey permeate and the distinctions in applying the teachings of decalcification to the processing of whey versus the processing of sugar. Thus, applicant urges that the present amended claims are patentable over the cited art.

More particularly, paragraph 7 of the Declaration demonstrates the need in the dairy industry for an efficient method of removal of Ca^{2+} and Mg^{2+} ions, including the need for softening the whey to carry out the process. The Declaration also establishes that although methods are known for the exchange of Ca^{2+} and Mg^{2+} ions with Na^{+} or K^{+} ions in the sugar refinery industry using strong cationic resins, the method was not effective for softening whey due to the formation of complexes between the Ca^{2+} and Mg^{2+} ions and the conjugate base of some acids (see paragraph 8). Deficiencies in the use of weak cationic resins, with more affinity to Ca^{2+} and Mg^{2+} ions, are also described as requiring costly regeneration in a two step process (see paragraph 9).

The Declaration confirms that the methods known in the sugar industry, related to the technological area of the Saska et al. reference, had disadvantages when applied to dairy solutions. See paragraph 10. Thus, the combination of Saska et al. with the Noel or the Jönsson reference is not considered to be proper for rejecting the present claims directed to a method of decalcification of an aqueous whey or whey permeate solution.

Notwithstanding, the Declaration goes on to establish that the claimed invention provides new and unexpected results. In doing so, it is demonstrated that the use of an anionic resin with a monovalent anion prior to the use of a cationic resin with a monovalent metal cation as the counter ion is more efficient than the use of a cationic resin alone. It is further demonstrated that the exchange of divalent anions by monovalent anions before the cation exchange improves the availability of the Ca^{2+} and Mg^{2+} ions, thereby improving the efficiency of the cationic resin.

In this regard, the table in paragraph 15 shows the improved results when practicing the present claimed invention, notably the use of the anionic resin prior to the softening step. The table in paragraph 19 further shows the improved results when using a strong anionic resin prior to a cationic resin and two strong cationic resins in equivalent conditions. The results shown, as described in paragraphs 16-18 and paragraphs 20-24 of the Declaration, are far superior to the results obtained when practicing the present invention.

The new and unexpected results established in the attached Declaration demonstrate that the claimed invention is not obvious over the properly applied cited references. Favorable consideration and allowance of the present claims is therefore respectfully requested and earnestly solicited.

Respectfully submitted,

Gerald E. Hespos, Esq.
Atty. Reg. No. 30,066
Customer No. 01218
CASELLA & HESPOS LLP
274 Madison Avenue - Suite 1703
New York, NY 10016
Tel. (212) 725-2450
Fax (212) 725-2452

Date: July 28, 2009